



2002137

DATA EVALUATION RECORD

Terrestrial Field Dissipation of Pyraclostrobin

CAS NO: 175013-18-0

Pyraclostrobin (BAS 500 F)

164-1

MRID # 45367503

BASF Reg. # 2001/5001126

Jackson, S., M. Saha, and J. McDonell. March 23, 2001. 1999 Field dissipation of BAS 500..F in terrestrial use patterns: Formulation bridge. Unpublished study performed by BASF Agro Research, Research Triangle Park, NC, and sponsored by BASF Corporation, Research Triangle Park, NC. BASF Study No. 46313. BASF Registration Document No. 2001/5001126. Study initiated March 4, 1999 and completed March 23, 2001.

SECONDARY REVIEWER: Amer Al-Mudallal, Chemist
Environmental Risk Branch 1, EFED

SIGNATURE :

DATE : 11 / 5 / 02

CONCLUSIONS:

1- The study MRID # 45367503 is **acceptable** and satisfies the guideline requirement for a terrestrial field dissipation study.

2- Main deficiencies:

- a- Pan evaporation data were not submitted. Such data are necessary to measure water balances and to assess whether sufficient water was present to facilitate leaching of the test substance.

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Data Requirement: PMRA Data Code:
EPA DP Barcode: D274092
OECD Data Point:
EPA Guideline: 164-1

Test material: BAS 500 00 F and BAS 500 DI F

End Use Product name: Not provided

Concentration of a.i. 250 g/L (EC formulation) or 20.3% (WG formulation)

Formulation type: Emulsifiable concentrate (BAS 500 00 F) and Wettable granule (BAS 500 DI F)

Active ingredient

Common name: Pyraclostrobin

Chemical name:

IUPAC: Methyl-*N*-{2-[1-(4-chlorophenyl)-1*H*-pyrazol-3-yloxymethyl]phenyl}(*N*-methoxy)-carbamate

CAS name: Methyl[2-[[[1-(4-chlorophenyl)-1*H*-pyrazol-3-yl]oxy]methyl]phenyl]-methoxy-carbamate

CAS No: 175013-18-0

Synonyms: Pyraclostrobin; methyl-*N*[[[(1-(4-chlorophenyl)pyrazol-3-yl]oxy]-*o*-tolyl]-*N*-methoxycarbamate

SMILES string:

Primary Reviewer: Allen Roberts
Dynamac Corporation


Signature:
Date:

QC Reviewer: Joan Harlin
Dynamac Corporation

Signature:
Date:

Secondary Reviewer(s): Amer Al-Mudallal
EPA

Signature:
Date:


9/5/01

Company Code: [for PMRA]
Active Code: [for PMRA]
Use Site Category: [for PMRA]
EPA PC Code: 099100

CITATION: Jackson, S., M. Saha, and J. McDonell. March 23, 2001. 1999 Field dissipation of BAS 500..F in terrestrial use patterns: Formulation bridge. Unpublished study performed by BASF Agro Research, Research Triangle Park, NC, and sponsored by BASF Corporation, Research Triangle Park, NC. BASF Study No. 46313. BASF Registration Document No. 2001/5001126. Study initiated March 4, 1999 and completed March 23, 2001.

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EXECUTIVE SUMMARY:

Soil dissipation/accumulation of pyraclostrobin (EC and WG formulations) under U.S. field conditions was conducted in bare plots at two sites in Sargent County, North Dakota and Tulare County, California (Ecoregions not provided). The experiment was carried out in accordance with the U.S. EPA Pesticide Assessment Guidelines Subdivision N, 164-1 and in compliance with the U.S. EPA FIFRA (40 CFR, Part 160) GLP standard. Pyraclostrobin was surface broadcasted six times at approximately 0.22 kg a.i./ha/application (0.197-0.204 lb a.i./A/application) in 6 x 30 m subplots. The proposed label rate was not provided. Rainfall was supplemented with irrigation to reach the 10-year average rainfall. The treated plots were approximately 8 m apart at the North Dakota site and were not separated by buffer zones at the California site. The control plot was 15 m away from the treated plots at the North Dakota site and >152 m away from the treated plots at the California site.

The application rate was verified for the first, third, and sixth applications using petri dishes containing control soil. Following each of the three applications, the 15 petri dishes were used to create five composite samples. There was 96-101 and 99-107% recovery in the samples from these monitors based on the field application calculations at the North Dakota site for the plots treated with the EC and WG formulations, respectively, and 76-89 and 54-93% recovery based on the field application calculations at the California site for the plots treated with the EC and WG formulations, respectively. Field spiking of the samples was done by fortifying control soil with pyraclostrobin at an unspecified concentration. There was 76 and 95% recovery of the applied pyraclostrobin in the field spiked samples at the North Dakota and California sites, respectively.

Soil samples were taken prior to the first application, immediately following the first application, at 1, 2, 3, 4, and 5 days following the first application, one day prior to the second application, immediately following the second application, one day prior to the third application, immediately following the third application, one day prior to the fourth application, immediately following the fourth application, one day prior to the fifth application, immediately following the fifth application five, and one day prior to the last application, and immediately following the last application for both plots at both field sites. Soil samples were then taken at 1, 2, 3, 5, 7, 10, 14, 21, 30, 58, 86, 117, 272, and 359 d post-application to a depth of 0-122 cm for the North Dakota site (both plots) and at 1, 2, 3, 5, 7, 10, 14, 21, 30, 61, 90, 120, 180, 268, 359, and 426 d post-application to a depth of 0-122 cm for the California site (both plots). The soil samples were extracted by shaking with acetonitrile and the pyraclostrobin residues were analyzed by HPLC-MS/MS. Identification of the transformation products was done by HPLC-MS/MS and HPLC-MS. The LOQ for parent and transformation products in soil was 0.010 mg/kg.

At the North Dakota site, the measured zero-time concentration in the plot treated with the EC formulation was 0.250 mg a.i./kg soil, which is 125% of the applied rate. Pyraclostrobin dissipated from 0.756 mg a.i./kg soil at Day 0 (0-5.1 cm depth) to 0.032 mg a.i./kg soil by Day 359. The major transformation products detected were BF 500-3, BF 500-5, BF 500-6, and BF 500-7, with maximum concentrations of 5.3, 6.3 (1 of 3 replicates), 36, and 20% of the applied amount, observed at 1/3, 7, 272, and 272 days posttreatment, respectively, in the 0-5.1 cm soil

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layer. The corresponding concentrations at the end of the study period were 0, 0, 9.3, and 4.3% of the applied amount, respectively. The residues of pyraclostrobin and its transformation products were primarily detected in the top (0-5.1 cm) soil layer.

At the North Dakota site, the measured zero-time concentration in the plot treated with the WG formulation was 0.317 mg a.i./kg soil, which is 159% of the applied rate. Pyraclostrobin dissipated from 0.830 mg a.i./kg soil at Day 0 (0-5.1 cm depth) to 0.030 mg a.i./kg soil by Day 359. The major transformation products detected were BF 500-3, BF 500-5, BF 500-6, and BF 500-7, with maximum concentrations 5.7, 5, 24.3, and 13.7% of the applied amount, observed at -7/1-3, 30, 272, and 272 days posttreatment, respectively, in the 0-5.1 cm soil layer. The corresponding concentrations at the end of the study period were 0, 0, 8.3, and 4.7% of the applied amount, respectively. The residues of pyraclostrobin and its transformation products were primarily detected in the top (0-5.1 cm) soil layer.

At the California site, the measured zero-time concentration in the plot treated with the EC formulation was 0.210 mg a.i./kg soil, which is 105% of the applied rate. Pyraclostrobin dissipated from 0.753 mg a.i./kg soil at Day 0 (0-5.1 cm depth) to 0.027-0.034 mg a.i./kg soil (2 of 3 replicates) by Day 180, and was not detected following 180 days posttreatment. The major transformation products detected were BF 500-3, BF 500-6, and BF 500-7, with maximum concentrations of 8, 12.3, and 11.3-18.7% (2 of 3 replicates) of the applied amount, observed at 5, 180, and 180 days posttreatment, respectively, in the 0-5.1 cm soil layer. The corresponding concentrations at the end of the study period were 0, 7.7-8.7 (2 of 3 replicates), and 4-6% (2 of 3 replicates) of the applied amount, respectively. The residues of pyraclostrobin and its transformation products were primarily detected in the top (0-5.1 cm) soil layer.

At the California site, the measured zero-time concentration in the plot treated with the WG formulation was 0.314 mg a.i./kg soil, which is 157% of the applied rate. Pyraclostrobin dissipated from 0.609 mg a.i./kg soil at Day 0 (0-5.1 cm depth) to 0.011 mg a.i./kg soil (1 of 3 replicates) by Day 180, and was not detected following 180 days posttreatment. The major transformation products detected were BF 500-3, BF 500-6, and BF 500-7, with maximum concentrations of 8, 15, and 11.3% of the applied amount, observed at 0/2-4, 120, and 120 days posttreatment, respectively, in the 0-5.1 cm soil layer. The corresponding concentrations at the end of the study period were 0, 7.7, and 5% of the applied amount, respectively. The residues of pyraclostrobin and its transformation products were primarily detected in the top (0-5.1 cm) soil layer.

Mass accounting was not reported in this study because the test material was not radiolabeled.

Under bareground field conditions at the North Dakota site, pyraclostrobin (EC and WG formulations) had a DT50 value of 11.0-11.3 d, and a DT75 value of 41.0-42.0 d. At the end of the 359-day period, the total carryover of residues of pyraclostrobin was 10-11% of the applied amount.

Under bareground field conditions at the California site, pyraclostrobin (EC and WG formulations) had a DT50 value of 11.7-14.7 d, and a DT75 value of 29.2-31.8 d. At the end of

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the 426-day period, the total carryover of residues of pyraclostrobin was 0% of the applied amount.

The major route of dissipation of pyraclostrobin under bareground terrestrial field conditions at the North Dakota and California sites (EC and WG formulations) was transformation.

RESULTS SYNOPSIS

Location/soil type: Sargent County, North Dakota/silt loam

Tulare County, California/sandy loam

DT50: North Dakota site: 11.0 days (EC formulation) and 11.3 days (WG formulation)

California site: 11.7 days (EC formulation) and 14.7 days (WG formulation)

DT75: North Dakota site: 41.0 days (EC formulation) and 42.0 days (WG formulation)

California site: 29.2 days (EC formulation) and 31.8 days (WG formulation)

Major transformation products detected: BF 500-3, BF 500-5, BF 500-6, and BF 500-7

Dissipation routes: Transformation

Study Acceptability: This study is classified acceptable and satisfies the guideline requirement for a terrestrial field dissipation study.

I. MATERIALS AND METHODS

GUIDELINE FOLLOWED: The study was conducted according to U.S. EPA Pesticide Assessment Guidelines Subdivision N, Environmental Fate, 164-1. The study did not deviate from the guideline.

COMPLIANCE: The study was conducted in compliance with U.S. EPA FIFRA (40 CFR Part 160) Good Laboratory Practice standards. The GLP Compliance Statement was signed by the study director, sponsor, and submitter (March 2001). A No Data Confidentiality statement was provided while a Quality Assurance statement was not provided.

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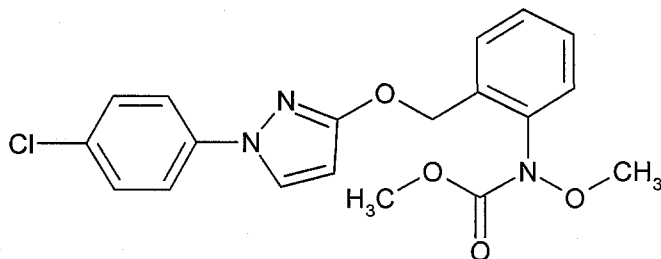
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A. MATERIALS:

1. Test Material BAS 500..F

Chemical Structure of the active ingredient(s):



Description: Emulsifiable Concentrate (EC)
Wettable Granule (WG)

**Storage conditions of
test chemicals:** North Dakota site: 55.2 to 84.4°F
California site: 47 to 90°F

Physico-chemical properties of the active ingredient: Pyraclostrobin

Parameter	Values	Comments
Water solubility	Not provided	
Vapour pressure/volatility	1.3×10^{-10} kPa	
UV absorption	Not provided	
pKa	Not provided	
$K_{ow}/\log K_{ow}$	Not provided	
Stability of Compound at room temperature	Not provided	

Data from p. 18

2. Test site: Test sites were located in Sargent County, North Dakota and Tulare County, California (Figure 1, p. 81). The test plots had previously been treated with Roundup Ultra (2.0 lb a.i./A) at the North Dakota site and with Roundup (1%), Lorox DF (1.0 lb a.i./A), Sevin (4.0 lb a.i./A), PennCap M (0.5-1.0 lb a.i./A), and Dithane M-45 (1.6-3.2 lb a.i./A) at the California site (Appendix B, pp. 94, 104).

Table 1: Geographic location, site description and climatic data at the study sites.

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Details		Sargent County, ND	Tulare County, CA
Geographic coordinates	Latitude	Not provided	Not provided
	Longitude	Not provided	Not provided
	Province/State	North Dakota	California
	Country	USA	USA
	Ecoregion	Not provided	Not provided
Slope Gradient		<1%	<0.5%
Depth to ground water (m)		0.91-1.8 (3-6 ft)	77.7 (255 ft)
Distance from weather station used for climatic measurements		Temperature (12 miles) Precipitation (onsite)	Temperature (19.7 miles) Precipitation (onsite)
Indicate whether the meteorological conditions before starting or during the study were within 30 year normal levels (Yes/No). If no, provide details.		Yes	Yes
Other details, if any		N/A	N/A

Data from pp. 51-52; Appendix B, pp. 94, 104

Table 2: Site usage and management history for the previous three years.

Use	Year	Sargent County, ND	Tulare County, CA
Crops grown	Previous year	Fallow	Fallow
	2 years previous	Fallow	Fallow, control plot planted with celery
	3 years previous	Fallow	Fallow, control plot planted with lettuce and tomato
Pesticides used	Previous year	None	Roundup
	2 years previous	Roundup Ultra	Roundup, Lorox DF
	3 years previous	None	Sevin, Pennncap M, Dithane —45
Fertilizers used	Previous year	Not provided	Not provided
	2 years previous	Not provided	Not provided
	3 years previous	Not provided	Not provided
Cultivation methods, if provided (eg., Tillage)	Previous year	Not provided	Not provided
	2 years previous	Not provided	Not provided
	3 years previous	Not provided	Not provided

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Use	Year	Sargent County, ND	Tulare County, CA
Other details, if any	Previous year	Not provided	Not provided
	2 years previous	Not provided	Not provided
	3 years previous	Not provided	Not provided

Data from pp. 51-52, Appendix B, pp. 94, 104-105

3. Soils:

Table 3: Properties of the soil from Sargent County, ND

Property	Depth (cm)							
	0-15.2	15.2-30.5	30.5-45.7	45.7-61.0	61.0-76.2	76.2-91.4	91.4-106.7	106.7-121.9
Textural classification	Silt loam	Clay loam	Clay loam	Clay loam	Silty clay loam	Silt loam	Silt loam	Silty clay loam
% sand	24.2	21.9	22.2	21.7	17.0	16.1	11.2	10.4
% silt	51.0	47.2	48.5	46.7	45.5	65.0	62.3	59.8
% clay	24.8	30.9	29.3	31.6	37.5	18.9	26.5	29.8
pH (1:1 soil:water or other)	7.6	8.1	8.0	8.1	8.2	8.2	8.2	8.2
Total organic matter (%)	4.3	2.1	1.3	1.1	0.7	0.5	0.4	Not provided
CEC (meq/100 g)	23.4	24.8	31.1	39.1	28.7	39.3	37.1	44.3
Bulk density (g/cm ³)	1.28-1.49	1.39-1.48	1.40-1.60	1.47-1.68	1.45-1.78	1.52-1.76	1.54-1.78	1.61-1.77
Moisture at 1/3 atm (%)	34.1	32.5	30.2	31.0	30.7	31.3	32.8	33.6
Taxonomic classification (e.g., ferro-humic podzol)	Coarse-silty, mixed Pachic Udic Haploborolls and Coarse-silty, frigid Aeric Calcicquolls							
Soil mapping unit	Not provided (Gardena-Glyndon soil association)							
Others								

Data from Appendix B, p. 87

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Table 4: Properties of the soil from Tulare County, CA

Property	Depth (cm)							
	0-15.2	15.2-30.5	30.5-45.7	45.7-61.0	61.0-76.2	76.2-91.4	91.4-106.7	106.7-121.9
Textural classification	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam	sandy loam
% sand	56	66	70	70	70	70	66	62
% silt	38	30	26	26	26	26	30	34
% clay	6	4	4	4	4	4	4	4
pH (1:1 soil:water or other)	7.9	8.4	8.4	8.5	8.7	9.0	9.1	9.2
Total organic matter (%)	0.9	0.3	0.3	0.2	0.2	0.2	0.2	0.2
CEC (meq/100 g)	9.4	9.0	9.3	9.8	10.5	10.0	8.3	8.3
Bulk density (g/cm ³)	1.47-1.57	1.41-1.47	1.29-1.46	1.39-1.46	1.36-1.40	1.30-1.40	1.27-1.37	1.20-1.39
Moisture at 1/3 atm (%)	14.3	12.6	12.7	13.2	11.6	12.8	13.7	13.2
Taxonomic classification (e.g., ferro-humic podzol)	Mixed, Thermic Typic Torripsamments							
Soil mapping unit	Not provided (Cajon series)							
Others								

Data from Appendix B, p. 87

B. EXPERIMENTAL DESIGN:

1. Experimental design:

Table 5: Experimental design.

Details		Sargent County, ND		Tulare County, CA	
		EC Formulation	WG Formulation	EC Formulation	WG Formulation
Duration of study		359 days	359 days	426 days	426 days
Uncropped (bare) or cropped		Bare	Bare	Bare	Bare
Control used (Yes/No)		Yes		Yes	
No. of replications	Controls	3		3	
	Treatments	3	3	3	3
Plot size (L x W m)	Controls	6 x 9		6 x 9	

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Details		Sargent County, ND		Tulare County, CA	
		EC Formulation	WG Formulation	EC Formulation	WG Formulation
	Treatments	6 x 30	6 x 30	6 x 30	6 x 30
Distance between control plot and treated plot		15.2 m	15.2 m	>152 m	>152 m
Distance between treated plots		7.6 m	7.6 m	No buffer	No buffer
Application rates used (g a.i./ha)		220 (0.200-0.201 lb a.i./A)	220 (0.200-0.201 lb a.i./A)	220 (0.197-0.204 lb a.i./A)	220 (0.197-0.202 lb a.i./A)
Was the maximum label rate per ha used in study? (Yes/No)		Not reported	Not reported	Not reported	Not reported
Number of applications		6	6	6	6
Application Dates (dd mm yyyy)		23/6/99, 30/6/99, 7/7/99, 14/7/99, 21/7/99, and 28/7/99	23/6/99, 30/6/99, 7/7/99, 14/7/99, 21/7/99, and 28/7/99	28/4/99, 5/5/99, 12/5/99, 19/5/99, 26/5/99, and 2/6/99	28/4/99, 5/5/99, 12/5/99, 19/5/99, 26/5/99, and 2/6/99
For multiple applications, application rate at Day 0 and at each application time (mg a.i./kg soil) (5.1 cm depth)		0.29-0.34	0.29-0.34	0.27-0.29	0.27-0.29
Application method (eg., spraying, broadcast etc.)		Broadcast	Broadcast	Broadcast	Broadcast
Type of spray equipment, if used		Tractor-mounted CO ₂ powered, offset boom sprayer with 8 flat fan 8003 VS nozzles	Tractor-mounted CO ₂ powered, offset boom sprayer with 8 flat fan 8003 VS nozzles	Tractor-mounted, pto driven broadcast boom sprayer (FMC DP-20) with 12 flat fan 11003XR nozzles	Tractor mounted sprayer with 12 flat fan 11003 nozzles
Total volume of spray solution applied/plot OR total amount broadcasted/plot		40 gal/A	40 gal/A	39.6-40.8 gal/A	39.7-40.6 gal/A
Identification and volume of carrier (e.g., water), if used		Water	Water	Water	Water
Name and concentration of co-solvents, adjuvants and/or surfactants, if used		None	None	None	None

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Details		Sargent County, ND		Tulare County, CA	
		EC Formulation	WG Formulation	EC Formulation	WG Formulation
Indicate whether the following monthly reports were submitted:					
Average minimum and maximum precipitation		No	No	No	No
Average minimum and maximum air temperature		Yes	Yes	Yes	Yes
Average minimum and maximum soil temperature		No	No	No	No
Average annual frost-free periods		No	No	No	No
Indicate whether the Pan evaporation data were submitted		Yes	Yes	Yes	Yes
Meteorological conditions during application	Cloud cover	0, 20, 0, 60, 100, and 0%, respectively	0, 20, 0, 60, 100, and 0%, respectively	10, 0, 0, 0, 0, and 100%, respectively	10, 0, 0, 0, 0, and 100%, respectively
	Temperature (°C)	23.3, 21.1, 25.6, 25.6, 22.8, and 27.8, respectively	23.3, 21.1, 25.6, 25.6, 22.8, and 27.8, respectively	9.4, 10.6, 20.0, 19.4, 22.8, and 14.4, respectively	9.4, 10.6, 20.0, 19.4, 22.8, and 14.4, respectively
	Humidity	81, 72, 75, 86, 92, and 65%, respectively	81, 72, 75, 86, 92, and 65%, respectively	62, 74, 59, 84, 62, and 67%, respectively	62, 74, 59, 84, 62, and 67%, respectively
	Sunlight (hr)	Not provided	Not provided	Not provided	Not provided
Pesticides used during study:					
name of product/a.i. concentration: amount applied:		Roundup Ultra six applications at 1.0-2.0 lb a.i./A	Roundup Ultra six applications at 1.0-2.0 lb a.i./A	Roundup twelve applications at 1%	Roundup twelve applications at 1%
application method:		Not provided	Not provided	Not provided	Not provided
Supplemental irrigation used (Yes/No)		No	No	Yes	Yes
If yes, provide the following details:					
No. of irrigation:				108	108
Interval between irrigation:				1-64 days	1-64 days
Amount of water added each time:				0.5-1 in	0.5-1 in
Method of irrigation:				sprinkler	sprinkler

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Details	Sargent County, ND		Tulare County, CA	
	EC Formulation	WG Formulation	EC Formulation	WG Formulation
Indicate whether water received through rainfall + irrigation equals the 30 year average rainfall (Yes/No)	Yes	Yes	Yes	Yes
Were the application concentrations verified? (Briefly describe in Section 2*, if used)	Yes	Yes	Yes	Yes
Were field spikes used? (Briefly describe in Section 3 ¹ , if used)	Yes	Yes	Yes	Yes
Good agricultural practices followed (Yes or No)	Not provided	Not provided	Not provided	Not provided
Indicate if any abnormal climatic events occurred during the study (eg., drought, heavy rainfall, flooding, storm etc.)	None reported	None reported	None reported	None reported
If cropped plots are used, provide the following details: Plant - Common name/variety: Details of planting: Crop maintenance (eg., fertilizers used):	N/A	N/A	N/A	N/A
Volatilization included in the study (Yes/No) (if included, describe in Section 4 ⁸)	No	No	No	No
Leaching included in the study (Yes/No) (if included, describe in Section 5 ¹)	Yes	Yes	Yes	Yes
Run off included in the study (Yes/No) (if included, describe in Section 6 ⁹)	No	No	No	No

Data from pp. 51-52; Appendix B, pp. 82-85, 92-115

2. Application Verification: Fifteen petri dishes each containing approximately 10 g of sieved control soil, were placed in each plot prior to the first, third, and sixth applications (p. 14). Following each of the three applications, the 15 petri dishes were used to create five composite samples. The samples were shipped to the analytical laboratory and stored frozen until extraction and analysis. At the laboratory, samples were shaken with acetonitrile, centrifuged, serial diluted using acetonitrile:water (70:30, v:v), and analyzed using LC-MS-MS (p. 20).

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3. Field Spiking: Control soil samples (20 g) were fortified with BAS 500 (concentration not specified) at 0, 3, 7, 14, 30, 60, and 360 days posttreatment at both sites and transported and stored under the same conditions as the test samples (p. 15).

4. Volatilization: Volatilization was not studied

5. Leaching: Soil cores were collected to a depth of 48 inches at each sampling interval (pp. 13-14). Additionally, Time Domain Reflectometry was used to measure if sufficient water was applied to plots in order to determine if residues had an opportunity to move down through the soil profile and if compound movement correlated to recharge events (p. 24).

6. Run off: Run off was not measured.

7. Supplementary Study: A storage stability study was not conducted for this study.

8. Sampling:

Table 6: Soil sampling.

Details	Sargent County, ND		Tulare County, CA	
	EC Formulation	WG Formulation	EC Formulation	WG Formulation
Method of sampling (random or systematic)	Random	Random	Random	Random
Sampling intervals	Treated plots: -T1, T1, T1+1, T1+2, T1+3, T1+5, -T2, T2, -T3, T3, -T4, T4, -T5, T5, -T6, 0, 1, 2, 3, 5, 7, 14, 21, 30, 58, 86, 117, 272, and 359 days. Untreated plots: 1, 5, 30, 86, and 359 days.	Treated plots: -T1, T1, T1+1, T1+2, T1+3, T1+5, -T2, T2, -T3, T3, -T4, T4, -T5, T5, -T6, 0, 1, 2, 3, 5, 7, 14, 21, 30, 58, 86, 117, 272, and 359 days. Untreated plots: 1, 5, 30, 86, and 359 days.	Treated plots: -T1, T1, T1+1, T1+2, T1+3, T1+4, T1+5, -T2, T2, -T3, T3, -T4, T4, -T5, T5, -T6, T6, 1, 2, 3, 5, 7, 14, 30, 61, 90, 120, 180, 359, and 426 days. Untreated plots: 1, 5, 30, 90, 180, and 359 days.	Treated plots: -T1, T1, T1+1, T1+2, T1+3, T1+4, T1+5, -T2, T2, -T3, T3, -T4, T4, -T5, T5, -T6, T6, 1, 2, 3, 5, 7, 14, 30, 61, 90, 120, 180, 359, and 426 days. Untreated plots: 1, 5, 30, 90, 180, and 359 days.
Method of soil collection (eg., cores)	Cores	Cores	Cores	Cores
Sampling depth	48 inches	48 inches	48 inches	48 inches
Number of cores collected per plot	15 treated (5 per subplot) 5 untreated	15 treated (5 per subplot) 5 untreated	15 treated (5 per subplot) 5 untreated	15 treated (5 per subplot) 5 untreated
Number of segments per core	2	2	2	2

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Details	Sargent County, ND		Tulare County, CA	
	EC Formulation	WG Formulation	EC Formulation	WG Formulation
Length of soil segments	6 inches and 42 inches	6 inches and 42 inches	6 inches and 42 inches	6 inches and 42 inches
Core diameter (Provide details if more than one width)	4 in (0-6 in cores) 1.5-1.75 in (6-48 in cores)	4 in (0-6 in cores) 1.5-1.75 in (6-48 in cores)	4 in (0-6 in cores) 1.5-1.75 in (6-48 in cores)	4 in (0-6 in cores) 1.5-1.75 in (6-48 in cores)
Method of sample processing, if any	The 0-6 in core segments were sectioned into 0-2, 2-4, and 4-6 in segments and the 6-48 in core segments were sectioned into 6 in segments. All segments were composited by depth and subplot.	The 0-6 in core segments were sectioned into 0-2, 2-4, and 4-6 in segments and the 6-48 in core segments were sectioned into 6 in segments. All segments were composited by depth and subplot.	The 0-6 in core segments were sectioned into 0-2, 2-4, and 4-6 in segments and the 6-48 in core segments were sectioned into 6 in segments. All segments were composited by depth and subplot.	The 0-6 in core segments were sectioned into 0-2, 2-4, and 4-6 in segments and the 6-48 in core segments were sectioned into 6 in segments. All segments were composited by depth and subplot.
Storage conditions	≤0°C	≤0°C	≤0°C	≤0°C
Storage length (days)	up to 633	up to 633	up to 633	up to 633

Data from pp. 12-13, 18, 88-90; Table X-XXXIII, pp. 53-72.

9. Analytical Procedures: Soil samples were analyzed for residues of pyraclostrobin, BF 500-3, BF 500-4, BF 500-5, BF 500-6, and BF 500-7 (p. 18). The soil samples were extracted by shaking with acetonitrile and an aliquot of the extract was diluted with a buffer solution of water with 0.1% formic acid and 10 mM ammonium formate for HPLC-MS/MS analysis. For the analysis of BF 500-5, a 15% aliquot of the extract was evaporated to dryness at 60°C using a mild nitrogen stream, redissolved in a buffer solution of acetonitrile-water with 0.1% formic acid:10 mM ammonium formate (75:25, v:v), and analyzed by HPLC-MS (p. 19). The limit of quantitation (LOQ) for each analyte was 0.010 mg/kg.

II. RESULTS AND DISCUSSION

1. APPLICATION MONITORS: The recoveries in the field application monitors ranged from 96-101 and 99-107% based on the field application calculations at the North Dakota site for the plots treated with the EC and WG formulations, respectively, and 76-89 and 54-93% based on the field application calculations at the California site for the plots treated with the EC and WG formulations, respectively (Table 1, p. 27).

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2. RECOVERY FROM FIELD SPIKES: The mean recovery of pyraclostrobin from the field spiked samples was 76 and 95% of the applied at the North Dakota and California sites, respectively (Appendix F, p. 1014).

3. MASS ACCOUNTING: A mass accounting was not calculated by the applicant.

Table 7. Concentration of pyraclostrobin residues expressed as mg/kg soil, at the North Dakota site - EC formulation. Data are means of three replicates.

Compound	Soil depth (cm)	Sampling times (days)								
		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
Parent Compound	0-5.1	<0.01	0.267	0.226	0.238	0.251	0.171	0.208	0.443	0.237
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	0.634	0.311	0.672	0.435	0.681	0.506	0.756	0.716	0.748
	5.1-10.2	<0.01	<0.01	<0.01	0.092	0.097	0.094	0.046	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	0.026	<0.01	0.011	<0.01
		7	14	30	58	86	117	272	359	
	0-5.1	0.526	0.490	0.202	0.120	0.129	0.126	0.119	0.032	
	5.1-10.2	<0.01	0.003	<0.01	<0.01	0.004	<0.01	<0.01	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
BF-500-3		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	0.007	0.004	0.016	0.016
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		7	14	30	58	86	117	272	359	

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	0-5.1	0.009	0.009	<0.01	<0.01	<0.01	0.003	0.003	<0.01	
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
BF 500-5		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	0.012	0.004	0.005
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		7	14	30	58	86	117	272	359	
	0-5.1	0.006	0.006	0.004	NA	<0.01	NA	0.006	<0.01	
	5.1-10.2	<0.01	<0.01	<0.01	NA	<0.01	NA	<0.01	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	NA	NA	NA	<0.01	<0.01	
BF 500-6		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
	0-5.1	<0.01	0.006	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	0.021
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	15.2-30.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	0.028	0.051	0.045	0.026	0.043	0.052	0.034	0.056	0.088
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.025	<0.01
	15.2-30.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		7	14	30	58	86	117	272	359	

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	0-5.1	0.038	0.026	0.026	0.057	0.080	0.047	0.108	0.028	
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	0.01	<0.01	0.008	<0.01	<0.01	
	15.2-30.5	<0.01	<0.01	<0.01	0.01	0.016	<0.01	<0.01	<0.01	
BF 500-7		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.006	0.008	0.005
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.006	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	15.2-30.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	0.009	0.016	0.019	0.006	0.017	0.020	0.013	0.022	0.041
	5.1-10.2	<0.01	<0.01	0.003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	15.2-30.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		7	14	30	58	86	117	272	359	
	0-5.1	0.015	0.004	<0.01	0.024	0.031	0.030	0.060	0.013	
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.004	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	0.01	0.008	0.004	0.004	<0.01	
	15.2-30.5	<0.01	<0.01	<0.01	0.01	0.008	<0.01	0.004	<0.01	

Data from Tables X-XV, pp. 53-57

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Table 8. Concentration of pyraclostrobin residues expressed as mg/kg soil, at the North Dakota site -WG formulation. Data are means of three replicates.

Compound	Soil depth (cm)	Sampling times (days)								
		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
Parent Compound	0-5.1	<0.01	0.287	0.259	0.269	0.202	0.181	0.198	0.445	0.248
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	0.620	0.466	0.670	0.489	0.839	0.513	0.830	0.660	0.697
	5.1-10.2	<0.01	<0.01	0.005	<0.01	<0.01	<0.01	<0.01	<0.01	0.004
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	0.026	<0.01	<0.01	<0.01
		7	14	30	58	86	117	272	359	
	0-5.1	0.451	0.467	0.263	0.130	0.133	0.084	0.119	0.030	
	5.1-10.2	<0.01	0.005	<0.01	<0.01	0.004	<0.01	<0.01	0.004	
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
BF-500-3		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	0.015	0.014	0.015	0.014	0.017	0.017	0.016	0.014	0.017
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		7	14	30	58	86	117	272	359	
	0-5.1	0.013	0.013	0.009	<0.01	<0.01	<0.01	0.003	<0.01	
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
BF 500-5		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3

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	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.004	0.014
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.004	<0.01
		7	14	30	58	86	117	272	359	
	0-5.1	0.013	0.013	0.015	<0.01	<0.01	<0.01	NA	<0.01	
	5.1-10.2	<0.01	<0.01	<0.01	NA	NA	NA	<0.01	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	NA	NA	NA	<0.01	<0.01	
BF 500-6		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	0.021	0.013
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	0.013	0.028	0.034	0.026	0.036	0.018	0.029	0.025	0.042
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.025	<0.01
		7	14	30	58	86	117	272	359	
	0-5.1	0.033	0.026	0.031	0.028	0.047	0.044	0.073	0.025	
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	0.01	<0.01	0.008	<0.01	<0.01	
BF 500-7		-T1	T1	T1+1	T1+2	T1+3	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.004	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	3
	0-5.1	0.004	0.014	0.017	0.014	0.018	0.018	0.014	0.014	0.021
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		7	14	30	58	86	117	272	359	
	0-5.1	0.017	0.012	0.013	0.014	0.026	0.028	0.041	0.014	
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	

Data from Tables XVI-XXI, pp. 58-62

Table 9. Concentration of pyraclostrobin residues expressed as mg/kg soil, at the California site - EC formulation. Data are means of three replicates.

Compound	Soil depth (cm)	Sampling times (days)									
		-T1	T1	T1+1	T1+2	T1+3	T1+4	T1+5	-T2	T2	-T3
Parent Compound	0-5.1	<0.01	0.220	0.178	0.178	0.140	0.117	0.117	0.076	0.303	0.240
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	2	3
	0-5.1	0.471	0.302	0.505	0.460	0.692	0.543	0.753	0.636	0.642	0.530
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
	0-5.1	0.576	0.351	0.332	0.250	0.082	0.058	0.030	0.020	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BF-500-3		-T1	T1	T1+1	T1+2	T1+3	T1+4	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	2	3
	0-5.1	0.008	0.004	0.012	0.012	0.016	0.016	0.020	0.019	0.019	0.017
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
	0-5.1	0.024	0.013	0.015	0.010	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BF 500-6		-T1	T1	T1+1	T1+2	T1+3	T1+4	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	2	3
	0-5.1	<0.01	<0.01	<0.01	0.003	0.006	0.012	0.014	0.007	0.004	0.004
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
	0-5.1	0.017	<0.01	<0.01	0.013	0.017	0.011	0.023	0.037	0.017	0.016
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BF 500-7		-T1	T1	T1+1	T1+2	T1+3	T1+4	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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		T3	-T4	T4	-T5	T5	-T6	0	1	2	3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	0.005	0.007	0.006	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
	0-5.1	0.011	<0.01	<0.01	0.006	0.011	0.009	0.014	0.030	0.012	0.010
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Data from Tables XXII-XXVII, pp. 63-67

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Table 10. Concentration of pyraclostrobin residues expressed as mg/kg soil, at the California site - WG formulation. Data are means of three replicates.

Compound	Soil depth (cm)	Sampling time (days)									
		-T1	T1	T1+1	T1+2	T1+3	T1+4	T1+5	-T2	T2	-T3
Parent Compound	0-5.1	<0.01	0.025	0.023	0.019	0.020	0.131	0.104	0.107	0.319	0.194
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	2	3
	0-5.1	0.364	0.218	0.347	0.306	0.501	0.295	0.609	0.548	0.552	0.535
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
	0-5.1	0.465	0.335	0.332	0.200	0.045	0.027	0.013	0.004	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
BF-500-3		-T1	T1	T1+1	T1+2	T1+3	T1+4	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.004	0.007	0.019
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	2	3
	0-5.1	0.019	0.008	0.009	0.017	0.017	0.018	0.024	0.022	0.024	0.024
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
	0-5.1	0.024	0.021	0.022	0.015	0.002	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
BF 500-6		-T1	T1	T1+1	T1+2	T1+3	T1+4	T1+5	-T2	T2	-T3

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	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	2	3
	0-5.1	0.002	<0.01	0.004	<0.01	<0.01	0.008	0.004	0.003	<0.01	0.010
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
	0-5.1	0.017	0.015	0.011	0.015	0.030	0.026	0.045	0.029	0.021	0.023
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BF 500-7		-T1	T1	T1+1	T1+2	T1+3	T1+4	T1+5	-T2	T2	-T3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		T3	-T4	T4	-T5	T5	-T6	0	1	2	3
	0-5.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.007
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
		5	7	14	30	61	90	120	180	359	426
	0-5.1	0.009	0.010	0.008	0.004	0.020	0.016	0.034	0.021	0.014	0.015
	5.1-10.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	10.2-15.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Data from Tables XXVIII-XXXIII, pp. 68-72

4. PARENT COMPOUND: At the North Dakota site, the measured zero-time concentration in the plot treated with the EC formulation was 0.250 mg a.i./kg soil (corrected for residues measured prior to the sixth application), which is 125% of the applied rate (Table II, p. 28). Pyraclostrobin dissipated from the zero-day concentration (0.756 mg a.i./kg soil) to 0.490 mg

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a.i./kg soil by 14 days and 0.202 mg a.i./kg soil by 30 days, was 0.119-0.129 mg a.i./kg soil from 58 to 272 days, and was 0.032 mg a.i./kg soil at 359 days posttreatment in the 0-5.1 cm soil layer (Table X, p. 53). The concentration of pyraclostrobin below the 5.1-cm depth was generally negligible; however, the parent compound was detected in the 5.1-10.2 cm depth at 0.092-0.097 mg a.i./kg soil beginning prior to the fifth application to prior to the sixth application, and was detected at 0.046 mg a.i./kg soil immediately following the sixth application.

At the North Dakota site, the measured zero-time concentration in the plot treated with the WG formulation was 0.317 mg a.i./kg soil (corrected for residues measured prior to the sixth application), which is 159% of the applied rate (Table II, p. 28). Pyraclostrobin dissipated from the zero-day concentration (0.830 mg a.i./kg soil) to 0.451-0.467 mg a.i./kg soil by 7-14 days and 0.263 mg a.i./kg soil by 30 days, was 0.084-0.133 mg a.i./kg soil from 58-272 days, and was 0.030 mg a.i./kg soil at 359 days posttreatment in the 0-5.1 cm soil depth (Table XVI, p. 58). The concentration of pyraclostrobin below the 5.1-cm depth was negligible at all sampling times.

At the California site, the measured zero-time concentration in the plot treated with the EC formulation was 0.210 mg a.i./kg soil (corrected for residues measured prior to the sixth application), which is 105% of the applied rate (Table II, p. 28). Pyraclostrobin dissipated from the zero-day concentration (0.753 mg a.i./kg soil) to 0.332-0.351 mg a.i./kg soil by 7-14 days and 0.250 mg a.i./kg by 30 days, was 0.082 mg a.i./kg soil at 61 days, and was last detected at 0.027-0.034 mg a.i./kg soil (2 of 3 replicates) at 180 days posttreatment in the 0-5.1 cm soil depth (Table XXII, p. 63). The concentration of pyraclostrobin below the 5.1-cm depth was negligible at all sampling times.

At the California site, the measured zero-time concentration in the plot treated with the WG formulation was 0.314 mg a.i./kg soil (corrected for residues measured prior to the sixth application), which is 157% of the applied rate (Table II, p. 28). Pyraclostrobin dissipated from the zero-day concentration (0.609 mg a.i./kg soil) to 0.332-0.335 mg a.i./kg soil by 7-14 days and 0.200 mg a.i./kg by 30 days, was 0.045 mg a.i./kg soil at 61 days, and was last detected at 0.011 mg a.i./kg soil (1 of 3 replicates) at 180 days posttreatment in the 0-5.1 cm soil depth (Table XXVIII, p. 68). The concentration of pyraclostrobin below the 5.1-cm soil depth was negligible at all sampling times.

The 50% dissipation times (DT50s) of pyraclostrobin in soil under terrestrial field conditions using Origin® Scientific Graphics Software (Version 6.1, 2000; p. 23; Table III, p. 29, Figures 4-5, 8-9, pp. 30, 32) were:

Sargent County, ND, EC formulation	DT50 = 11.0 days	DT75 = 41.0 days
Sargent County, ND, WG formulation	DT50 = 11.3 days	DT75 = 42.0 days
Tulare County, CA, EC formulation	DT50 = 11.7 days	DT75 = 29.2 days
Tulare County, CA, WG formulation	DT50 = 14.7 days	DT75 = 31.8 days

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The dissipation pattern of pyraclostrobin was biphasic at the North Dakota and California sites (EC formulation only). Following six applications of the WG formulation at the California site, the dissipation pattern of pyraclostrobin was linear. Dissipation was generally most rapid during the initial 50 days of the study.

5. TRANSFORMATION PRODUCTS: The major transformation products detected in the bare plot treated with the EC formulation at the North Dakota site were BF 500-3, BF 500-5, BF 500-6, and BF 500-7, which had initial corresponding concentrations of 4.3 (1 of 3 replicates), 5.7, 3.7 (1 of 3 replicates), and 4.0% (1 of 3 replicates) of the applied amount in the 0-5.1 cm soil layer, observed on the day prior to the last application, the day prior to the last application, immediately following the first application, and one day prior to the second application, respectively (Tables XI, XIII-XV, pp. 54-57; Appendix C, Figure 2, pp. 149-151). The maximum concentrations were 5.3, 6.3 (1 of 3 replicates), 36, and 20% of the applied amount, observed at 1/3, 7, 272, and 272 days posttreatment, respectively, in the 0-5.1 cm soil layer. The corresponding concentrations at the end of the study period were 0, 0, 9.3, and 4.3% of the applied amount, respectively. The DT50 of BF 500-3, BF 500-5, BF 500-6, and BF 500-7 were 9.1 days, <359 days, <87 days, and <87 days, respectively, (Table III, p. 29; Figures 6, p. 31).

The major transformation products detected in the bare plot treated with the WG formulation at the North Dakota site were BF 500-3, BF 500-5, BF 500-6, and BF 500-7, which had initial corresponding concentrations of 5, 4 (1 of 3 replicates), 4.3, and 4% (1 of 3 replicates) of the applied amount in the 0-5.1 cm soil layer, observed immediately following the third application, one day following the last application, immediately following the third application, and immediately following the second application, respectively (Tables XVII, XIX-XXI, pp. 59-62). The maximum concentrations were 5.7, 5, 24.3, and 13.7% of the applied amount, observed at 7/1-3, 30, 272, and 272 days posttreatment, respectively, in the 0-5.1 cm soil layer. The corresponding concentrations at the end of the study period were 0, 0, 8.3, and 4.7% of the applied amount, respectively. The DT50s of BF 500-3, BF 500-5, and BF 500-6 were 29.5 days, <58 days, and <87 days, respectively (Table III, p. 29; Figures 7, p. 31).

The major transformation products detected in the bare plot treated with the EC formulation at the California site were BF 500-3, BF 500-6, and BF 500-7, which had initial corresponding concentrations of 3.7-4.3 (2 of 3 replicates), 3.3 (1 of 3 replicates), and 4.7% (1 of 3 replicates) of the applied amount in the 0-7.6 cm soil layer, observed immediately following the third application, immediately following the fifth application, and one day prior to the last application, respectively (Tables XXIII, XXVI-XXVII, pp. 64-67). The maximum concentrations were 8, 12.3, and 11.3-18.7% (2 of 3 replicates) of the applied amount, observed at 5, 180, and 180 days posttreatment, respectively, in the 0-5.1 cm soil layer. The corresponding concentrations at the end of the study period were 0, 7.7-8.7 (2 of 3 replicates), and 4-6% (2 of 3 replicates) of the applied amount, respectively. The DT50s of BF 500-3, BF 500-6, and BF 500-7 were 12.1 days, 91.3 days, and 109 days, respectively (Table III, p. 29; Figures 10, 12, 14, pp. 31, 33, 35).

The major transformation products detected in the bare plot treated with the WG formulation at the California site were BF 500-3, BF 500-6, and BF 500-7, which had initial corresponding concentrations of 3.7 (1 of 3 replicates), 3.7 (1 of 3 replicates re-analyzed), and 6.7-7% (1 of 3

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replicates re-analyzed) of the applied amount in the 0-5.1 cm soil layer, observed immediately following the second application, immediately following the third application, and three days following the last application, respectively (Tables XXIX, , XXXII-XXXIII, pp. 69-72). The maximum concentrations were 8, 15, and 11.3% of the applied amount, observed at 0/2-5, 120, and 120 days posttreatment, respectively, in the 0-5.1 cm soil layer. The corresponding concentrations at the end of the study period were 0, 7.7, and 5% of the applied amount, respectively. The DT50 of BF 500-3, BF 500-6, and BF 500-7 were 18.3 days, 228 days, and 147 days, respectively (Table III, p. 29; Figures 11, 13, 15, pp. 31, 33, 35).

Table 11: Chemical names and CAS numbers for the transformation products of pyraclostrobin.

Applicant's Code Name	CAS Number	CAS and/or IUPAC Chemical Name(s)	Chemical formula	Molecular weight	SMILES string
BF 500-3	Not provided	Not provided	$C_{18}H_6ClN_4O_3$	357.8	
BF 500-5	Not provided	Not provided	$C_9H_7ClN_2O$	194.6	
BF 500-6	Not provided	Not provided	$C_{32}H_{24}N_6Cl_2O_3$	611.5	
BF 500-7	Not provided	Not provided	$C_{32}H_{24}N_6Cl_2O_2$	595.5	

Data from Appendix C, pp. 149-151

6. EXTRACTABLE AND NON-EXTRACTABLE RESIDUES: N/A

Table 12: Dissipation routes of pyraclostrobin under field conditions.

Route of dissipation	% of applied amount (at the end of study period)
Accumulation (residues) in soil/ carry over	10-11% (ND site) and 0% (CA Site)
Transformation (% of transformation products)	Approximately 13% (both sites and formulations)
Leaching, if measured	The compound did not leach.
Volatilization, if measured	Volatilization was not measured.
Plant uptake, if measured	Plant uptake was not measured.
Run off, if measured	Run off was not measured.
Total	

7. VOLATILIZATION: Volatilization was not measured.

8. PLANT UPTAKE: N/A.

9. LEACHING: Pyraclostrobin and BF 500-3, BF 500-5, BF 500-6, and BF 500-7 were generally not detected below the 6-inch soil layer (p. 37). Time Domain Reflectometry data indicated that a recharge event occurred early in the studies at both sites (Figure 17-18, pp. 39-40).

10. RUN OFF: Run off was not measured.

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11. RESIDUE CARRYOVER: After 359 days, 10-11% of the applied parent compound was detected in the soil at the North Dakota site (EC and WG formulation) and has the potential to carryover into the following season. At the end of the study, carryover of the transformation products was approximately 13%. After 426 days, 0% of the applied parent compound was detected in the soil at the California site (EC and WG formulations) and has no potential to carryover into the following season. At the end of the study, carryover of the transformation products was approximately 13.0%.

12. SUPPLEMENTARY STUDY RESULTS: No supplementary studies were performed.

III. STUDY DEFICIENCIES: The study did not deviate from Subdivision N Guideline §164-1.

IV. REVIEWER'S COMMENTS:

1. The registrant-calculated DT50s of pyraclostrobin at the North Dakota site (EC formulation; 11.0 days and WG formulation; 11.3 days) and California site (EC formulation; 11.7 days and WG formulation; 14.7 days) are comparable to but slightly more rapid than the observed half-lives and the reviewer calculated half-lives of pyraclostrobin at the North Dakota site (EC formulation; 15.3 days and WG formulation; 22.8 days) and California site (EC formulation; 11.7 days and WG formulation; 22.5 days).
2. A storage stability was not conducted with this study. However, frozen storage stability data submitted in support of this study indicated that the parent compound is stable in soil for up to 733 days, and the degradate BF 500-3 is stable in soil for up to 18 months (Appendix E, pp. 1012-1013). The degradate BF 500-7 is relatively stable through 2 months, but some degradation (<20%) does appear to occur over a longer period. The degradates BF 500-4 and BF 500-5 are not stable in frozen storage and BF 500-6 is moderately stable (decreased to 73% of the applied by 18 months). The degradates BF 500-6 and BF 500-7 were reported as BF 505-6 and BF 505-7 in the storage stability table.
3. Pan evaporation data were not submitted. Such data are necessary to measure water balances and to assess whether sufficient water was present to facilitate leaching of the test substance.
4. The study authors stated that the field sites were representative of field and row crop production in the northern regions and irrigated western regions of the United States (p. 13).

V. REFERENCES:

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EPA MRID Number 45367503

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Chemical Name	Pyraclostobin	North Dakota Site
PC Code	099100	Emulsifiable Concentrate
MRID	45367503	
Guideline No.	164-1	

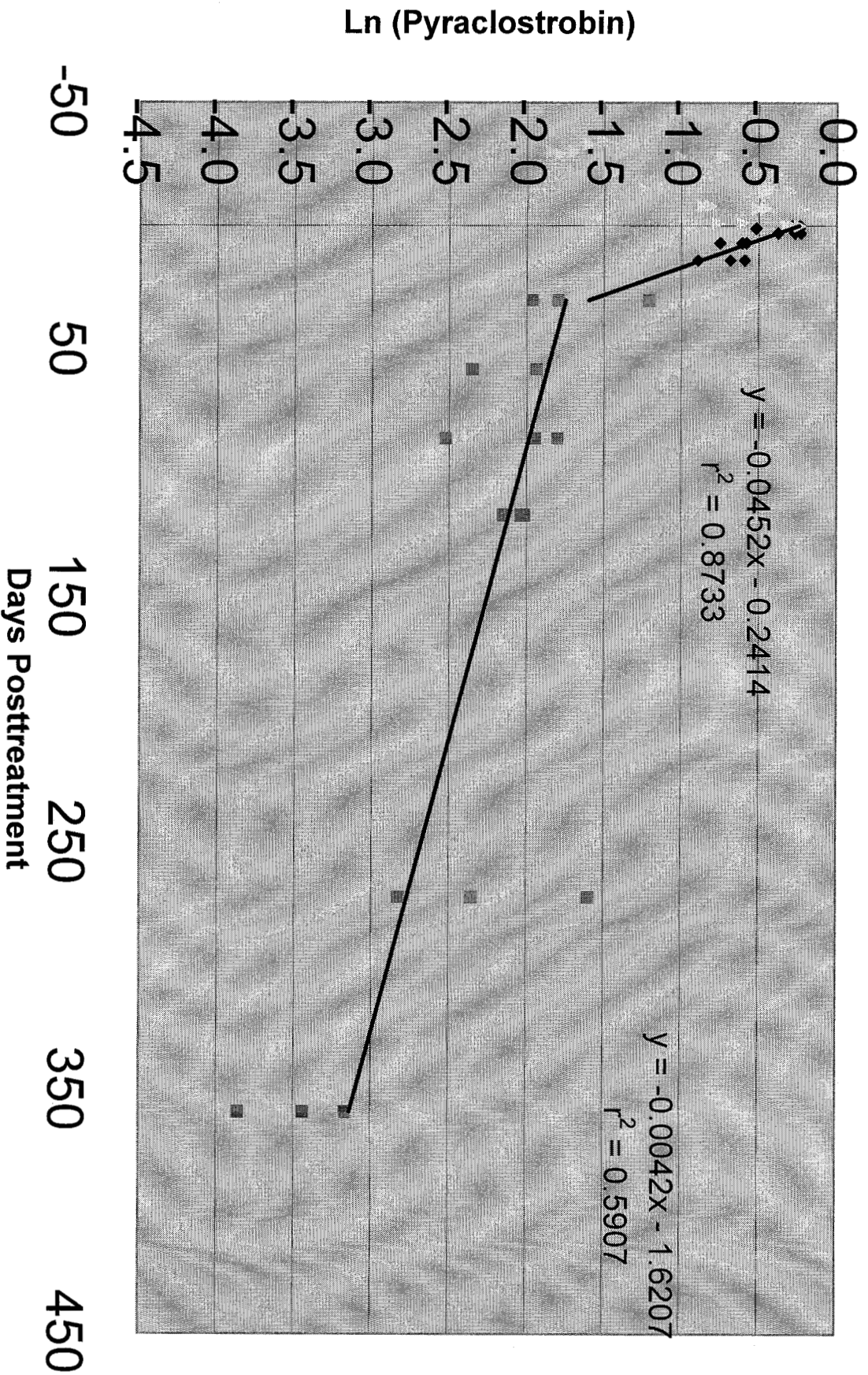
Half-life = 15.3 days

*Half-life calculated using 0-30 day data

Days Posttreatment	pyraclostobin (mg/kg)	(Pyraclostobi	Days	mg/kg	ln	Avg
Application 1 (-35 days)	0.269	-1.3130	-35	0.269	-1.3130	0.267
Application 1 (-35 days)	0.265	-1.3280	-35	0.265	-1.3280	
Application 1 (-35 days)	NA		-34	0.222	-1.5051	0.226
-34	0.222	-1.5051	-34	0.229	-1.4740	
-34	0.229	-1.4740	-33	0.203	-1.5945	0.238
-34	NA		-33	0.272	-1.3020	
-33	0.203	-1.5945	-32	0.246	-1.4024	0.251
-33	0.272	-1.3020	-32	0.256	-1.3626	
-33	NA		-30	0.183	-1.6983	0.171
-32	0.246	-1.4024	-30	0.159	-1.8389	
-32	0.256	-1.3626	-29	0.248	-1.3943	0.208
-32	NA		-29	0.167	-1.7898	
-30	0.183	-1.6983	-28	0.479	-0.7361	0.443
-30	0.159	-1.8389	-28	0.366	-1.0051	
-30	NA		-28	0.485	-0.7236	
-29	0.248	-1.3943	-22	0.231	-1.4653	0.237
-29	0.167	-1.7898	-22	0.242	-1.4188	
-29	NA		-21	0.616	-0.4845	0.634
Application 2 (-28 days)	0.479	-0.7361	-21	0.679	-0.3871	
Application 2 (-28 days)	0.366	-1.0051	-21	0.607	-0.4992	
Application 2 (-28 days)	0.485	-0.7236	-15	0.292	-1.2310	0.311
-22	0.231	-1.4653	-15	0.329	-1.1117	
-22	0.242	-1.4188	-14	0.641	-0.4447	0.672
-22	NA		-14	0.630	-0.4620	
Application 3 (-21 days)	0.616	-0.4845	-14	0.744	-0.2957	
Application 3 (-21 days)	0.679	-0.3871	-8	0.424	-0.8580	0.435
Application 3 (-21 days)	0.607	-0.4992	-8	0.446	-0.8074	
-15	0.292	-1.2310	-7	0.807	-0.2144	0.681
-15	0.329	-1.1117	-7	0.602	-0.5075	
-15	NA		-7	0.634	-0.4557	
Application 4 (-14 days)	0.641	-0.4447	-1	0.465	-0.7657	0.506
Application 4 (-14 days)	0.630	-0.4620	-1	0.547	-0.6033	
Application 4 (-14 days)	0.744	-0.2957	0	0.727	-0.3188	0.756
-8	0.424	-0.8580	0	0.752	-0.2850	
-8	0.446	-0.8074	0	0.789	-0.2370	
-8	NA		1	0.764	-0.2692	0.716
Application 5 (-7 days)	0.807	-0.2144	1	0.597	-0.5158	
Application 5 (-7 days)	0.602	-0.5075	1	0.788	-0.2383	
Application 5 (-7 days)	0.634	-0.4557	3	0.765	-0.2679	0.748
-1	0.465	-0.7657	3	0.793	-0.2319	
-1	0.547	-0.6033	3	0.687	-0.3754	
-1	NA		7	0.545	-0.6070	0.526
			7	0.560	-0.5798	

Days Posttreatment	pyraclostrobin (mg/kg)	(Pyraclostrobin)			
Application 6 (Day 0)	0.727	-0.3188	7	0.473	-0.7487
Application 6 (Day 0)	0.752	-0.2850	14	0.410	-0.8916
Application 6 (Day 0)	0.789	-0.2370	14	0.554	-0.5906
1	0.764	-0.2692	14	0.505	-0.6832
1	0.597	-0.5158	30	0.140	-1.9661
1	0.788	-0.2383	30	0.299	-1.2073
3	0.765	-0.2679	30	0.166	-1.7958
3	0.793	-0.2319	58	0.144	-1.9379
3	0.687	-0.3754	58	0.095	-2.3539
7	0.545	-0.6070	86	0.080	-2.5257
7	0.560	-0.5798	86	0.165	-1.8018
7	0.473	-0.7487	86	0.143	-1.9449
14	0.410	-0.8916	86	0.130	-2.0402
14	0.554	-0.5906	117	0.136	-2.1542
14	0.505	-0.6832	117	0.116	-2.1542
30	0.140	-1.9661	117	0.133	-2.0174
30	0.299	-1.2073	272	0.059	-2.8302
30	0.166	-1.7958	272	0.095	-2.3539
58	0.144	-1.9379	272	0.202	-1.5995
58	0.095	-2.3539	359	0.042	-3.1701
58	NA		359	0.032	-3.4420
86	0.080	-2.5257	359	0.021	-3.8632
86	0.165	-1.8018			
86	0.143	-1.9449			
117	0.130	-2.0402			
117	0.116	-2.1542			
117	0.133	-2.0174			
272	0.059	-2.8302			
272	0.095	-2.3539			
272	0.202	-1.5995			
359	0.042	-3.1701			
359	0.032	-3.4420			
359	0.021	-3.8632			

Dissipation of Pyraclostrobin (ND site, EC Formulation)



Pyraclostrobin
099100
45367503
164-1

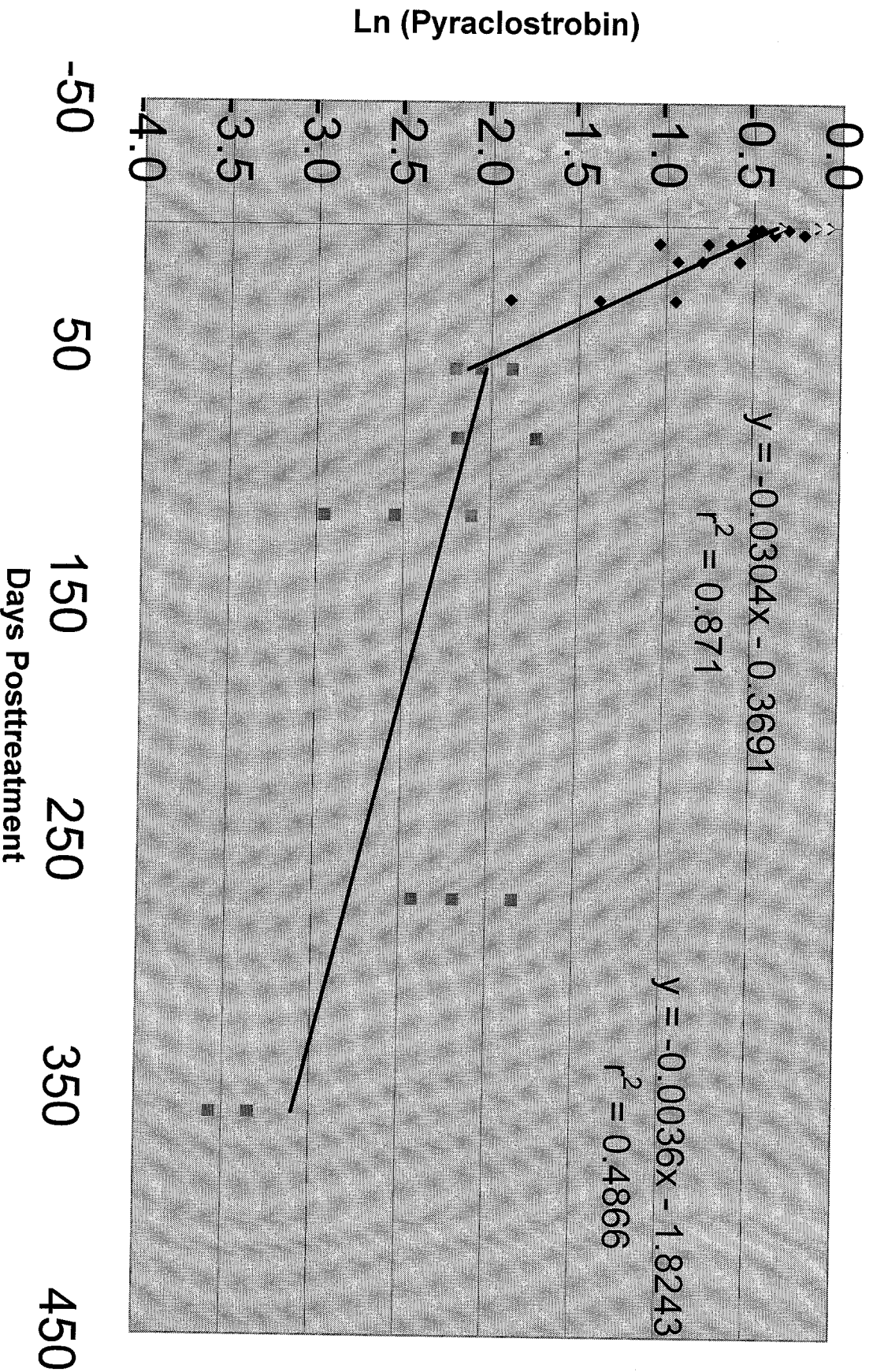
**North Dakota Site
Wettable Granular**

22.8 **days**
0-58 day data

Pyraclostrobin (mg/kg)	Ln (Pyraclostrobin)	Days	mg/kg	ln	Avg
0.277	-1.2837	-35	0.269	-1.3130	0.277
0.288	-1.2448	-35	0.265	-1.3280	
0.297	-1.2140	-35	0.297	-1.2140	
0.241	-1.4230	-34	0.241	-1.4230	0.259
0.276	-1.2874	-34	0.276	-1.2874	
NA		-33	0.231	-1.4653	0.269
0.231	-1.4653	-33	0.307	-1.1809	
0.307	-1.1809	-32	0.205	-1.5847	0.202
NA		-32	0.198	-1.6195	
0.205	-1.5847	-30	0.194	-1.6399	0.181
0.198	-1.6195	-30	0.167	-1.7898	
NA		-29	0.220	-1.5141	0.198
0.194	-1.6399	-29	0.175	-1.7430	
0.167	-1.7898	-28	0.455	-0.7875	0.445
NA		-28	0.480	-0.7340	
0.220	-1.5141	-28	0.400	-0.9163	
0.175	-1.7430	-22	0.229	-1.4740	0.248
NA		-22	0.267	-1.3205	
0.455	-0.7875	-21	0.635	-0.4541	0.620
0.480	-0.7340	-21	0.596	-0.5175	
0.400	-0.9163	-21	0.628	-0.4652	
0.229	-1.4740	-15	0.551	-0.5960	0.466
0.267	-1.3205	-15	0.380	-0.9676	
NA		-14	0.628	-0.4652	0.670
0.635	-0.4541	-14	0.771	-0.2601	
0.596	-0.5175	-14	0.610	-0.4943	
0.628	-0.4652	-8	0.540	-0.6162	0.489
0.551	-0.5960	-8	0.438	-0.8255	
0.380	-0.9676	-7	0.900	-0.1054	0.839
NA		-7	0.848	-0.1649	
0.628	-0.4652	-7	0.770	-0.2614	
0.771	-0.2601	-1	0.513	-0.6675	0.513
0.610	-0.4943	-1	0.513	-0.6675	
0.540	-0.6162	0	0.703	-0.3524	0.830
0.438	-0.8255	0	0.861	-0.1497	
NA		0	0.925	-0.0780	
0.900	-0.1054	1	0.632	-0.4589	0.660
0.848	-0.1649	1	0.610	-0.4943	
0.770	-0.2614	1	0.739	-0.3025	
0.513	-0.6675	3	0.682	-0.3827	0.697
0.513	-0.6675	3	0.808	-0.2132	
NA		3	0.601	-0.5092	
		7	0.353	-1.0413	0.451

Pyraclostrobin (mg/kg)	Ln (Pyraclostrobin)				
0.703	-0.3524	7	0.467	-0.7614	
0.861	-0.1497	7	0.532	-0.6311	
0.925	-0.0780	14	0.451	-0.7963	0.467
0.632	-0.4589	14	0.392	-0.9365	
0.610	-0.4943	14	0.559	-0.5816	
0.739	-0.3025	30	0.150	-1.8971	0.263
0.682	-0.3827	30	0.388	-0.9467	
0.808	-0.2132	30	0.251	-1.3823	
0.601	-0.5092	58	0.152	-1.8839	0.130
0.353	-1.0413	58	0.127	-2.0636	
0.467	-0.7614	58	0.110	-2.2073	
0.532	-0.6311	86	0.111	-2.1982	0.133
0.451	-0.7963	86	0.175	-1.7430	
0.392	-0.9365	86	0.112	-2.1893	
0.559	-0.5816	117	0.121	-2.1120	0.084
0.150	-1.8971	117	0.078	-2.5510	
0.388	-0.9467	117	0.052	-2.9565	
0.251	-1.3823	272	0.157	-1.8515	0.119
0.152	-1.8839	272	0.112	-2.1893	
0.127	-2.0636	272	0.088	-2.4304	
0.110	-2.2073	359	0.028	-3.5756	0.030
0.111	-2.1982	359	0.035	-3.3524	
0.175	-1.7430	359	0.028	-3.5756	
0.112	-2.1893				
0.121	-2.1120				
0.078	-2.5510				
0.052	-2.9565				
0.157	-1.8515				
0.112	-2.1893				
0.088	-2.4304				
0.028	-3.5756				
0.035	-3.3524				
0.028	-3.5756				

Dissipation of Pyraclostrobin (ND site, WG Formulation)



Chemical Name	Pyraclostobin	California Site
PC Code	099100	Emulsifiable Concentrate
MRID	45367503	
Guideline No.	164-1	

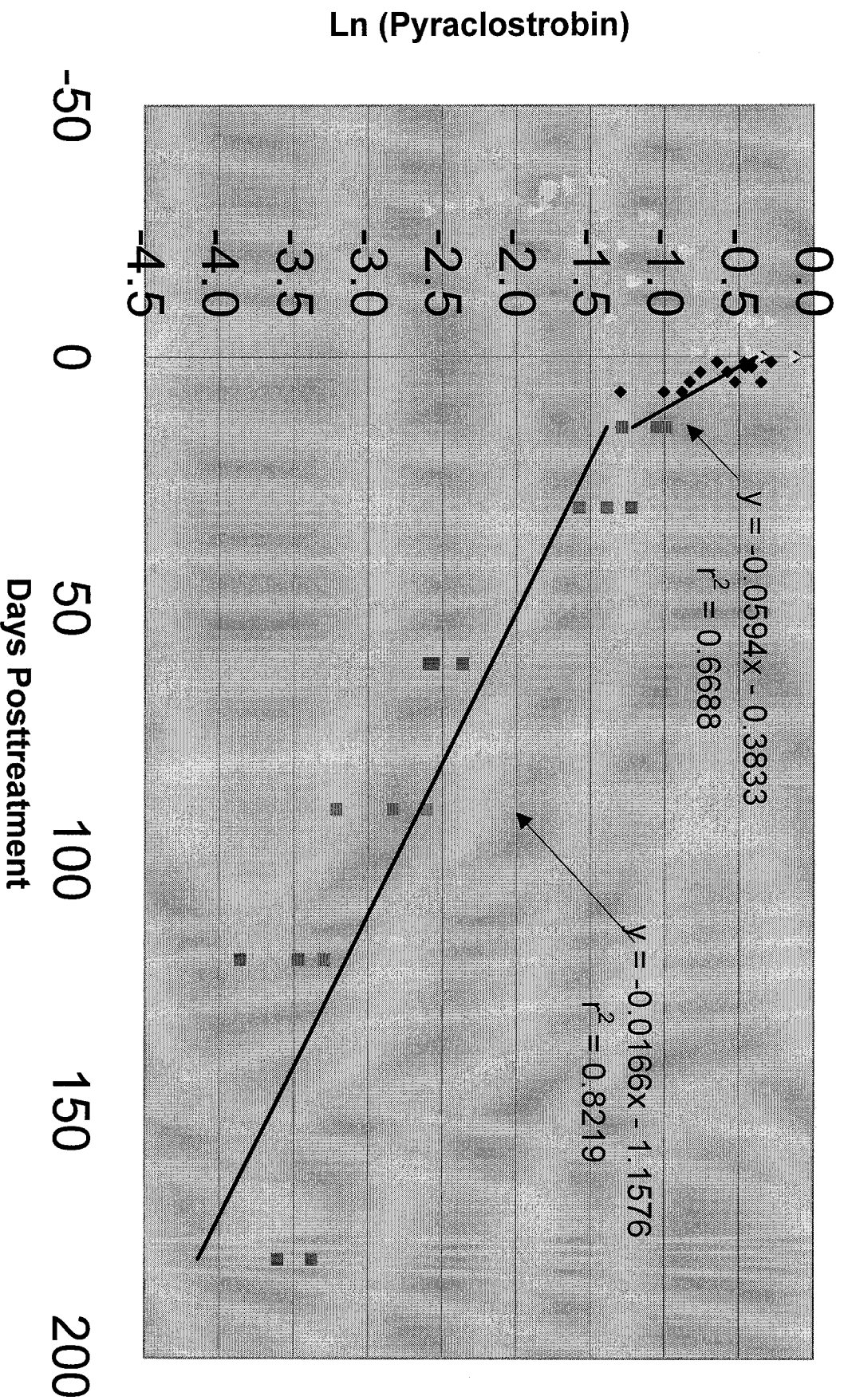
Half-life = 11.7 days

*Half-life calculated using 0-14 day data

Days Posttreatment	raclostrobin (mg/h	(Pyraclostrobi	Days	mg/kg	ln	Avg
Application 1 (-35 days)	0.241	-1.4230	-35	0.241	-1.4230	0.220
Application 1 (-35 days)	0.226	-1.4872	-35	0.226	-1.4872	
Application 1 (-35 days)	0.193	-1.6451	-35	0.193	-1.6451	
-34	0.167	-1.7898	-34	0.167	-1.7898	0.178
-34	0.175	-1.7430	-34	0.175	-1.7430	
-34	0.192	-1.6503	-34	0.192	-1.6503	
-33	0.172	-1.7603	-33	0.172	-1.7603	0.178
-33	0.164	-1.8079	-33	0.164	-1.8079	
-33	0.197	-1.6246	-33	0.197	-1.6246	
-32	0.170	-1.7720	-32	0.170	-1.7720	0.140
-32	0.124	-2.0875	-32	0.124	-2.0875	
-32	0.125	-2.0794	-32	0.125	-2.0794	
-31	0.137	-1.9878	-31	0.137	-1.9878	0.117
-31	0.100	-2.3026	-31	0.100	-2.3026	
-31	0.114	-2.1716	-31	0.114	-2.1716	
-30	0.100	-2.3026	-30	0.100	-2.3026	0.117
-30	0.087	-2.4418	-30	0.087	-2.4418	
-30	0.164	-1.8079	-30	0.164	-1.8079	
-29	0.076 (0.075/0.076	-2.5770	-29	0.076	-2.5770	0.114
-29	<0.01		-29	0.152	-1.8839	
-29	0.152 (0.145/0.158	-1.8839	-28	0.321	-1.1363	0.303
Application 2 (-28 days)	0.321	-1.1363	-28	0.341	-1.0759	
Application 2 (-28 days)	0.341	-1.0759	-28	0.248	-1.3943	
Application 2 (-28 days)	0.248	-1.3943	-22	0.241	-1.4230	0.240
-22	0.241	-1.4230	-22	0.201	-1.6045	
-22	0.201	-1.6045	-22	0.278	-1.2801	
-22	0.278	-1.2801	-21	0.558	-0.5834	0.471
Application 3 (-21 days)	0.558	-0.5834	-21	0.436	-0.8301	
Application 3 (-21 days)	0.436	-0.8301	-21	0.420	-0.8675	
Application 3 (-21 days)	0.420	-0.8675	-15	0.297	-1.2140	0.302
-15	0.297	-1.2140	-15	0.306	-1.1842	
-15	0.306	-1.1842	-15	0.303	-1.1940	
-15	0.303	-1.1940	-14	0.465	-0.7657	0.505
Application 4 (-14 days)	0.465	-0.7657	-14	0.525	-0.6444	
Application 4 (-14 days)	0.525	-0.6444	-14	0.524	-0.6463	
Application 4 (-14 days)	0.524	-0.6463	-8	0.257	-1.3587	0.461
-8	0.257 (0.293/0.221	-1.3587	-8	0.624	-0.4716	
-8	0.624	-0.4716	-8	0.502	-0.6892	
-8	0.502	-0.6892	-7	0.647	-0.4354	0.692
Application 5 (-7 days)	0.647	-0.4354	-7	0.752	-0.2850	
Application 5 (-7 days)	0.752	-0.2850	-7	0.677	-0.3901	
Application 5 (-7 days)	0.677	-0.3901	-1	0.512	-0.6694	0.543
			-1	0.458	-0.7809	

Days Posttreatment	raclostrobin (mg/h) (Pyraclostrobin)					
-1	0.512	-0.6694	-1	0.660	-0.4155	
-1	0.458	-0.7809	0	0.881	-0.1267	0.753
-1	0.660	-0.4155	0	0.708	-0.3453	
Application 6 (Day 0)	0.881	-0.1267	0	0.669	-0.4020	
Application 6 (Day 0)	0.708	-0.3453	1	0.524	-0.6463	0.636
Application 6 (Day 0)	0.669	-0.4020	1	0.631	-0.4604	
1	.524 (0.540/0.507)	-0.6463	1	0.752	-0.2850	
1	0.631	-0.4604	2	0.633	-0.4573	0.642
1	.752 (0.783/0.721)	-0.2850	2	0.660	-0.4155	
2	0.633	-0.4573	2	0.632	-0.4589	
2	0.660	-0.4155	3	0.468	-0.7593	0.530
2	0.632	-0.4589	3	0.561	-0.5780	
3	0.468	-0.7593	3	0.561	-0.5780	
3	0.561	-0.5780	5	0.435	-0.8324	0.576
3	0.561	-0.5780	5	0.591	-0.5259	
5	.435 (0.455/0.414)	-0.8324	5	0.703	-0.3524	
5	0.591	-0.5259	7	0.273	-1.2983	0.351
5	0.703	-0.3524	7	0.413	-0.8843	
7	0.273	-1.2983	7	0.366	-1.0051	
7	0.413	-0.8843	14	0.275	-1.2910	0.332
7	0.366	-1.0051	14	0.348	-1.0556	
14	0.275	-1.2910	14	0.372	-0.9889	
14	0.348	-1.0556	30	0.249	-1.3903	0.250
14	0.372	-0.9889	30	0.207	-1.5750	
30	0.249	-1.3903	30	0.294	-1.2242	
30	0.207	-1.5750	61	0.075	-2.5903	0.082
30	.294 (0.306/0.281)	-1.2242	61	0.094	-2.3645	
61	0.075	-2.5903	61	0.077	-2.5639	
61	.094 (0.097/0.090)	-2.3645	61	0.074	-2.6037	0.058
61	0.077	-2.5639	90	0.040	-3.2189	
90	0.074	-2.6037	90	0.059	-2.8302	
90	.040 (0.040/0.040)	-3.2189	120	0.031	-3.4738	0.030
90	0.059	-2.8302	120	0.021	-3.8632	
120	0.031	-3.4738	120	0.037	-3.2968	
120	.021 (0.021/0.021)	-3.8632	180	0.027	-3.6119	0.0305
120	0.037	-3.2968	180	0.034	-3.3814	
180	0.027	-3.6119				
180	0.01 (<0.01/<0.01)					
180	0.034	-3.3814				
359	<0.01					
359	<0.01					
359	<0.01					
426	<0.01					
426	<0.01					
426	<0.01					

Dissipation of Pyraclostrobin (CA site, EC Formulation)



Pyraclostobin California Site
099100 Wettable Granular
45367503
164-1

22.5 days
0-120 day data

aclostrobin (mg/n	(Pyraclostrobin	Days	mg/kg	ln	Avg
0.025	-3.6889	-35	0.025	-3.6889	0.025
0.025	-3.6889	-35	0.025	-3.6889	
0.025	-3.6889	-35	0.025	-3.6889	
0.025	-3.6889	-34	0.025	-3.6889	0.023
0.022	-3.8167	-34	0.022	-3.8167	
0.023	-3.7723	-34	0.023	-3.7723	
0.021	-3.8632	-33	0.021	-3.8632	0.019
0.017	-4.0745	-33	0.017	-4.0745	
0.019	-3.9633	-33	0.019	-3.9633	
0.018	-4.0174	-32	0.018	-4.0174	0.020
0.019	-3.9633	-32	0.019	-3.9633	
0.024	-3.7297	-32	0.024	-3.7297	
0.111	-2.1982	-31	0.111	-2.1982	0.131
0.140	-1.9661	-31	0.140	-1.9661	
0.143	-1.9449	-31	0.143	-1.9449	
0.115	-2.1628	-30	0.115	-2.1628	0.104
0.106	-2.2443	-30	0.106	-2.2443	
0.090	-2.4079	-30	0.090	-2.4079	
0.115	-2.5770	-29	0.115	-2.5770	0.107
0.112	-2.5770	-29	0.112	-2.5770	
0.093	-1.8839	-29	0.093	-1.8839	
0.359	-1.0244	-28	0.359	-1.0244	0.319
0.310	-1.1712	-28	0.310	-1.1712	
0.289	-1.2413	-28	0.289	-1.2413	
0.199	-1.6145	-22	0.199	-1.6145	0.194
0.193	-1.6451	-22	0.193	-1.6451	
0.191	-1.6555	-22	0.191	-1.6555	
374 (0.385/0.36	-0.9835	-21	0.374	-0.9835	0.364
336 (0.336/0.33	-1.0906	-21	0.336	-1.0906	
383 (0.407/0.35	-0.9597	-21	0.383	-0.9597	
0.236	-1.4439	-15	0.236	-1.4439	0.218
0.203	-1.5945	-15	0.203	-1.5945	
0.215	-1.5371	-15	0.215	-1.5371	
0.345	-1.0642	-14	0.345	-1.0642	0.347
0.402	-0.9113	-14	0.402	-0.9113	
293 (0.271/0.31	-1.2276	-14	0.293	-1.2276	
0.335	-1.3587	-8	0.335	-1.3587	0.306
0.305	-1.1874	-8	0.305	-1.1874	
0.277	-1.2837	-8	0.277	-1.2837	
0.613	-0.4894	-7	0.613	-0.4894	0.501
0.445	-0.8097	-7	0.445	-0.8097	
0.444	-0.8119	-7	0.444	-0.8119	
		-1	0.324	-1.1270	0.295

Pyraclostrobin (mg/n)					
0.324	-1.1270	0	0.674	-0.3945	0.609
0.291	-1.2344	0	0.555	-0.5888	
0.269	-1.3130	0	0.598	-0.5142	
0.674	-0.3945	1	0.543	-0.6463	0.5475
0.555	-0.5888	1	0.552	-0.5942	
0.598	-0.5142	2	0.508	-0.6773	0.552
0.543	-0.6463	2	0.551	-0.5960	
0.552	-0.5942	2	0.598	-0.5142	
NA		3	0.621	-0.4764	0.535
0.508	-0.6773	3	0.569	-0.5639	
0.551	-0.5960	3	0.414	-0.8819	
0.598	-0.5142	5	0.493	-0.8324	0.465
0.621	-0.4764	5	0.462	-0.7722	
0.569	-0.5639	5	0.441	-0.8187	
414 (0.428/0.40)	-0.8819	7	0.462	-0.7722	0.335
0.493	-0.8324	7	0.317	-1.1489	
0.462	-0.7722	7	0.227	-1.4828	
0.441	-0.8187	14	0.364	-1.0106	0.332
0.462	-0.7722	14	0.332	-1.1026	
0.317	-1.1489	14	0.301	-1.2006	
227 (0.243/0.21)	-1.4828	30	0.168	-1.7838	0.200
0.364	-1.0106	30	0.235	-1.4482	
0.332	-1.1026	30	0.197	-1.2242	
0.301	-1.2006	61	0.052	-2.9565	0.045
0.168	-1.7838	61	0.070	-2.3645	
0.235	-1.4482	61	0.014	-4.2687	
0.197	-1.2242	90	0.023	-3.7723	0.027
052 (0.048/0.05)	-2.9565	90	0.018	-3.2189	
070 (0.064/0.07)	-2.3645	90	0.039	-3.2442	
014 (0.014/0.01)	-4.2687	120	0.019	-3.9633	0.0195
0.023	-3.7723	120	0.020	-3.8632	
0.018	-3.2189	180	0.011	-4.5099	0.011
0.039	-3.2442				
0.019	-3.9633				
0.020	-3.8632				
<0.01					
0.011	-4.5099				
<0.01					
<0.01					
<0.01					
<0.01					
<0.01					
<0.01					
<0.01					
<0.01					

Dissipation of Pyraclostrobin (CA site, WG Formulation)

